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| 10/698,735 | 10/31/2003 | Ravinder Prakash | CHA920030024US1 | 3130 |
| 45095 7590 04/15/2009 HOFFMAN WARNICK LLC 75 STATE ST 14 FL ALBANY, NY 12207 | | | | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PTOCommunications@hoffmanwarnick.com

Office Action Summary

Application No.

10/698,735

Applicant(s)

PRAKASH ET AL.

Examiner

BERNARD KRASNIC

Art Unit

2624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 January 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,5-11,13-16,18-20 and 22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,5-11,13-16,18-20 and 22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. The amendment filed 1/21/2009 have been entered and made of record.
2. The Applicant has canceled claim(s) 4, 12, 17 and 21.
3. The application has pending claim(s) 1-3, 5-11, 13-16, 18-20 and 22.

4. In response to the amendments filed on 1/21/2009:

The "Claim rejections under 35 U.S.C. 101" have been entered, but the Applicant has not amended a few of the addressed 35 U.S.C. 101 issues and therefore the Examiner has once again addressed these issues.

5. The Applicant's arguments with respect to claims 1-3, 5-11, 13-16, 18-20 and 22 have been considered but are moot in view of the new ground(s) of rejection because the Applicant has amended independent claim(s) 1, 8, 16, and 20 to include the limitation "by comparing the distance values of the characters in the first string of inaccurate character data with the distance values of the second string of accurate character data".
6. Applicant's arguments filed 1/21/2009 have been fully considered but they are not persuasive.

The Applicant alleges, "Applicant has herein amended claim 16 to include a computing device ..." in page 8, and states respectively that the Applicant amended claim 16 to include a computing device and therefore claims 16, 18 and 19 are now statutory under 35 U.S.C. 101. The Examiner disagrees because the amended limitation "using a computing device" in claim 16 still does not tie the method claim to a particular apparatus (i.e. a computer processor for processing the specific method steps) but rather ties the method claim to a generic computing device. Therefore the 35 U.S.C. 101 rejections are still maintained for claims 16, 18 and 19 as is discussed below in the claim rejections section.

The Applicant alleges, "Applicants traverses the rejection ..." in page 8 through "Accordingly, Applicant submits that claim 1 ..." in page 10, and states respectively that none of the prior art references teach or suggest such a feature of "by comparing the distance values of the characters in the first string of inaccurate character data with the distance values of the second string of accurate character data" or even provide any motivation for such a combination. The Examiner agrees that this new amended limitation is not explicitly suggested by the prior art references Tyburski, Ott, or Murdock [these three prior art references were used in a 35 U.S.C. 103(a) rejection in the Non-Final Office Action dated 10/21/2008] neither alone nor in combination. However based on a further search and consideration, the Examiner will introduce a new prior art reference Bradford (US 5,805,747) to teach such a limitation. Bradford discloses the positional data / character position information includes a distance value / x y coordinate distance for each character representing a distance from the character to a

predetermined location on a document / left edge of page [x coordinate] or top edge of page [y coordinate] containing the printed character data (see Bradford, col. 12 at lines 39-41, col. 13 at lines 17-20 and 22-26, the synchronization unit aligns the output character positions from the various OCR devices wherein detailed position information includes x and y position coordinates for every character on a page to produce the optimum alignment of multiple OCR devices, the x coordinate positional information exemplifies the horizontal distance of the character from the left edge of the page and the y coordinate positional information exemplifies the vertical distance of the character from the top of the page); character position synchronization determines proper character positioning by comparing / aligning the distance values of the characters in the first string of inaccurate character data with the distance values of the second string of accurate character data [Murdock's accurate and inaccurate two strings from OCR_A and OCR_B] (see Bradford, Figs. 3-4, col. 12 at lines 39-41, col. 13 at lines 17-20 and 22-26, the synchronization unit aligns the output character positions of the strings from the various OCR devices wherein detailed position information includes x and y position coordinates for every character on a page to produce the optimum alignment of multiple OCR devices, the x coordinate positional information exemplifies the horizontal distance of the character from the left edge of the page and the y coordinate positional information exemplifies the vertical distance of the character from the top of the page).

Therefore the current claims are still not in condition for allowance because they are still not patentably distinguishable over the prior art references. Further discussions are addressed in the art rejections section below.

Claim Rejections - 35 USC § 101

7. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

8. Claim(s) 16 and 18-19 [claims 18-19 are dependent upon claim 16] is/are

rejected under 35 U.S.C. 101 as not falling within one of the four statutory categories of invention. The Federal Circuit¹, relying upon Supreme Court precedent², has indicated that a statutory "process" under 35 U.S.C. 101 **must (1) be tied to a particular machine or apparatus**, or (2) transform a particular article to a different state or thing. This is referred to as the "machine or transformation test", whereby the recitation of a particular machine or transformation of an article must impose meaningful limits on the claim's scope to impart patent-eligibility (See *Benson*, 409 U.S. at 71-72), and the involvement of the machine or transformation in the claimed process must not merely be insignificant extra-solution activity (See *Flook*, 437 U.S. at 590"). While the instant claim(s) recite a series of steps or acts to be performed, the claim(s) neither transform an article nor positively tie to a particular machine that accomplishes the claimed method steps, and therefore do not qualify as a statutory process. That is, the amended limitation "using a computing device" in claim 16 still does not tie the method claim to a particular apparatus (i.e. a computer processor for processing the specific

¹ *In re Bilski*, 88 USPQ2d 1385 (Fed. Cir. 2008).

² *Diamond v. Diehr*, 450 U.S. 175, 184 (1981); *Parker v. Flook*, 437 U.S. 584, 588 n.9 (1978); *Gottschalk v. Benson*, 409 U.S. 63, 70 (1972); *Cochrane v. Deener*, 94 U.S. 780, 787-88 (1876).

method steps) but rather ties the method claim to a generic computing device. Any amendment to the claim(s) should be commensurate with its corresponding disclosure.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

10. Claims 6-7, 14-15 and 18-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Re Claims 6 and 7: The claim limitation "of claim 4" is indefinite and unclear because claim 4 has been canceled. It is suggested to be -- of claim 1 --.

Re Claims 14 and 15: The claim limitation "of claim 12" is indefinite and unclear because claim 12 has been canceled. It is suggested to be -- of claim 8 --.

Re Claims 18 and 19: The claim limitation "of claim 17" is indefinite and unclear because claim 17 has been canceled. It is suggested to be -- of claim 16 --.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 1, 3, 5, 7-11, 13, 15-16, 18-20 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Murdock et al (US 5,418,864, as applied in previous Office Action) in view of Bradford (US 5,805,747).

Re Claim 1: Murdock discloses a character recognition system / character recognition (see Murdock, Fig. 2), comprising at least one transducer system / multiple OCR engines for scanning printed character data / converting a page of a document into a digitized character stream and generating a plurality of sets / multiple sets (one for each OCR engine in Fig. 2) of transduced character information / output of each multiple OCR engine (see Murdock, Fig. 2, col. 3 at lines 19-64); a position collection system / controller for collectively storing positional data for each of a plurality of characters in each set of transduced character information (see Murdock, col. 4 at lines 44-46, col. 6 at lines 16-18, 30-36 and 50-60, see the two tables in col. 7 and 8 at lines 5-20 respectively, using for example two transducers OCR_A and OCR_B, the controller creates and stores lists [for future synchronization] of the position of the plurality of characters in each of the two string sets OCR_A = "This old rrian" and OCR_B = "This oldl man"); a character position synchronization system / synchronization controller that utilizes the positional data stored for the plurality of characters to positionally

synchronize corresponding characters from different sets of transduced character information (see Murdock, col. 10 at lines 57-63), wherein the character position synchronization system determines a proper position of each character in a first string of inaccurate character data having a missing or erroneously added character based on a second string of accurate character data that does not have any missing or erroneously added characters (see Murdock, col. 4 at lines 44-46, col. 6 at lines 16-18, col. 10 at lines 57-63, using for example the two transducers OCR_A and OCR_B, the synchronization controller synchronizes the position of the inaccurate character data [errors occur when a character is recognized when no character exists, and when a character is recognized as multiple characters] with the position of the accurate character data for the two strings "This old rrian" and "This old man"); and a voting engine for receiving the positionally synchronized sets of transduced character information (see Murdock, Ref. No's. 36, 38, 40 and 42 of Fig. 3, col. 6 at lines 50-60, col. 10 at line 53 through col. 11 at line 10, with the two transduced positionally synchronized string characters [(T/T), (h/h), (i/i), (s/s), (0/0), (o/o), (l,l), (d/cl), (0/0), (rri/m), (a/a), (n/n)], further match/mismatch and merge processing is performed to output the final correct character output stream).

However Murdock fails to explicitly suggest that the positional data includes a distance value for each character representing a distance from the character to a predetermined location on a document containing the printed character data. Murdock also fails to explicitly suggest that the character position synchronization determines proper character positioning by comparing the distance values of the characters in the

first string of inaccurate character data with the distance values of the second string of accurate character data.

Bradford discloses the positional data / character position information includes a distance value / x y coordinate distance for each character representing a distance from the character to a predetermined location on a document / left edge of page [x coordinate] or top edge of page [y coordinate] containing the printed character data (see Bradford, col. 12 at lines 39-41, col. 13 at lines 17-20 and 22-26, the synchronization unit aligns the output character positions from the various OCR devices wherein detailed position information includes x and y position coordinates for every character on a page to produce the optimum alignment of multiple OCR devices, the x coordinate positional information exemplifies the horizontal distance of the character from the left edge of the page and the y coordinate positional information exemplifies the vertical distance of the character from the top of the page); character position synchronization determines proper character positioning by comparing / aligning the distance values of the characters in the first string of inaccurate character data with the distance values of the second string of accurate character data [Murdock's accurate and inaccurate two strings from OCR_A and OCR_B] (see Bradford, Figs. 3-4, col. 12 at lines 39-41, col. 13 at lines 17-20 and 22-26, the synchronization unit aligns the output character positions of the strings from the various OCR devices wherein detailed position information includes x and y position coordinates for every character on a page to produce the optimum alignment of multiple OCR devices, the x coordinate positional information exemplifies the horizontal distance of the character from the left edge of the page and

the y coordinate positional information exemplifies the vertical distance of the character from the top of the page).

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Murdock's system, using Bradford's teachings by including the x coordinate and y coordinate positional information to Murdock's synchronization system in order to produce an optimum alignment of multiple OCR devices (see Bradford, col. 13 at lines 17-20 and 22-26).

As to claim 8, the claim is the corresponding broader apparatus claim to claim 1 respectively. The discussions are addressed with regard to claim 1.

As to claim 16, the claim is the corresponding method claim to claim 1 respectively. The discussions are addressed with regard to claim 1.

As to claim 20, the claim is the corresponding means plus function claim to claim 1 respectively. The discussions are addressed with regard to claim 1.

The limitations, as recited in claim 20, "means for collectively storing" in line 3, and "means for positionally synchronizing" in line 5, invoke 35 USC 112, 6th paragraph.

Re Claim 3: Murdock further discloses at least one transducer system / multiple OCR engines generates a plurality of sets of transduced character information based on different gray-scale level settings (see Murdock, col. 6 at lines 30-36, different gray-scale level setting can be set by having regular font or boldfaced font for the character).

Re Claim 5: Bradford further discloses the predetermined location includes an edge of the document (see Bradford, Figs. 3-4, col. 12 at lines 39-41, col. 13 at lines 17-20 and 22-26, the synchronization unit aligns the output character positions of the strings from the various OCR devices wherein detailed position information includes x and y position coordinates for every character on a page to produce the optimum alignment of multiple OCR devices, the x coordinate positional information exemplifies the horizontal distance of the character from the left edge of the page and the y coordinate positional information exemplifies the vertical distance of the character from the top of the page).

Re Claims 7: Bradford further discloses the character position synchronization system determines if characters from different sets of transduced characters correspond to each other by matching / aligning and matching the position measurement / x y coordinate of the characters in different sets / characters from the multiple OCR devices, within a predetermined tolerance (see Bradford, Figs. 3-4, col. 12 at lines 39-41, col. 13 at lines 17-20 and 22-26, the synchronization unit aligns the output character positions of the strings from the various OCR devices wherein detailed position information includes x and y position coordinates for every character on a page to produce the optimum alignment of multiple OCR devices, the x coordinate positional information exemplifies the horizontal distance of the character from the left edge of the page and the y coordinate positional information exemplifies the vertical distance of the character from the top of the page, the predetermined tolerance limitation is silent but

an aligning and matching between two characters could only be done within a bound tolerance).

Re Claim 9: Murdock further discloses at least one transducer system / multiple OCR engines for scanning printed character data / converting a page of a document into a digitized character stream and generating the corresponding sets of transduced character information / output of each multiple OCR engine (see Murdock, Fig. 2, col. 3 at lines 19-64).

As to claim 10, the discussions are addressed with respect to claim 3.

Re Claim 11: Murdock further discloses a voting engine for processing the corresponding sets of transduced character information (see Murdock, Ref. No's. 36, 38, 40 and 42 of Fig. 3, col. 6 at lines 50-60, col. 10 at line 53 through col. 11 at line 10, with the two transduced positionally synchronized string characters [(T/T), (h/h), (i/i), (s/s), (0/0), (o/o), (l,l), (d/cl), (0/0), (rr/m), (a/a), (n/n)], further match/mismatch and merge processing is performed to output the final correct character output stream).

As to claims 13 and 15, the discussions are addressed with respect to claims 5 and 7.

As to claims 18 and 19, the discussions are addressed with respect to claims 5 and 7.

As to claim 22, the discussions are addressed with respect to claim 7.

The limitation, as recited in claim 22 "means for positionally synchronizing" in line 1, invokes 35 USC 112, 6th paragraph.

13. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Murdock, as modified by Bradford, and further in view of Tyburski et al (US 3,764,978, as applied in previous Office Action). The teachings of Murdock, as modified by Bradford, have been discussed above.

Re Claim 2: Murdock discloses an optical character recognition (OCR) (see Murdock, Fig. 2, multiple OCR engines).

However Murdock as modified by Bradford fails to explicitly suggest an optical character recognition (OCR) transducer and a magnetic ink character recognition (MICR) transducer.

Tyburski discloses an optical character recognition (OCR) transducer and a magnetic ink character recognition (MICR) transducer (see Tyburski, Abstract at lines 1-3, Fig. 1 reference No's. 2 and 4, col. 2 at lines 25-28, the sync logic is used to synchronize the character recognition between the OCR and MICR signals in order to provide a system with an extremely low rate of erroneous character recognition).

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify Murdock's system, as modified by Bradford, using Tyburski's teachings by including a MICR transducer in order to improve the

recognition of characters by providing an extremely low rate of erroneous character recognition (see, Tyburski, col. 2 at lines 25-28).

14. Claims 6 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Murdock, as modified by Bradford, and further in view of Shustorovich et al (US 5,542,006). The teachings of Murdock, as modified by Bradford, have been discussed above.

Re Claim 6: Although Bradford discloses that the position measurement provides a distance from an upper left or lower right pixel of the character (see Bradford, col. 13 at lines 20-22), Murdock as modified by Bradford doesn't explicitly suggest each position measurement provides a distance from a middle point of the character to the predetermined location. Shustorovich discloses that it would have been exceedingly obvious to one of ordinary skill in the art at the time the invention was made to further modify Murdock, as modified by Bradford, to include such a limitation of measuring from the middle point of the character instead of from the upper left or lower right point of the character in order to more accurately and efficiently recognize characters (see Shustorovich, col. 8 at lines 23-39, col. 10 at lines 62-67, col. 5 at lines 63-65).

As to claim 14, the discussions are addressed with respect to claim 6.

Conclusion

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Shizuka et al discloses a magnetic ink character recognition apparatus to align characters; Takiguchi et al discloses a magnetic ink character reading apparatus and generating position information.

16. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bernard Krasnic whose telephone number is (571) 270-

1357. The examiner can normally be reached on Mon-Thur 8:00am-4:00pm and every other Friday 8:00am-3:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh Mehta can be reached on (571) 272-7453. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Bhavesh M Mehta/
Supervisory Patent Examiner, Art Unit 2624
Bernard Krasnic
April 1, 2009